

BMS-CPUCANB

The BMS system has everything needed to display the condition and maintain the health of your lithium batteries. It consists of two major components: the computer (CPU) and the cell sense boards (also called Slave Module). The computer will tell you many things about the condition of your batteries. It will show overview information like the battery state-of-charge, battery current, battery voltage as well as the voltage and temperature of individual cells. The computer will also control loads and charging to protect the lithium batteries. The cell sense boards mount on each individual cell to read voltage and temperature. They also have a battery balancing circuit to automatically equalize the charge of all the cells in a battery pack.

Features:

- Simple user Interface
- Summary and detail screens
- Composite video output
- Over voltage output to control battery charger
- Under voltage output to control load
- Battery to chassis detection
- Measurement system isolated from 12V
- Built in isolated CAN interface
- Deutsch automotive connectors
- Cell voltage and temperature measurement
- Only 5 wires required for cell measurements
- Automatic cell balancing
- Superior automotive grade waterproof case



Applications:

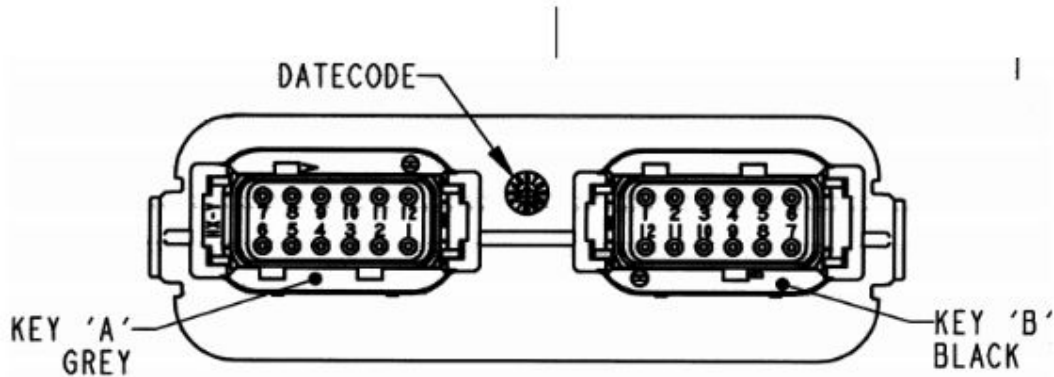
<ul style="list-style-type: none"> • Electric Cars • Golf Carts • Special purpose vehicles • Marine power systems 	<ul style="list-style-type: none"> • Demand charge reduction • Solar power systems • Mobile power • Uninterruptable power systems
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Specifications

Items Displayed	Voltage, Current, Battery Capacity on main screen Cell number, Cell voltage, cell temperature on detail screen
Computer Power	10-14.5V, 150mA
Battery Voltage	12V-500V
Shunt Input	Upto 500A , (50mV consumption)
Voltage Resolution	0.1V

Current Resolution	0.1A
Temperature Measurement Range	-4F to +160F or -20°C to +71°C
Battery Types Supported	LiFePO4
Video Output	Composite Video, Color, NTSC RS-170
Programming Port	Asynchronous Serial, TTL levels, 115200, n, 8, 1
Measurement accuracy	Better than 1% of Full Scale
Measurement speed	10ms per cell
Number of cells supported	128
Cell Voltage	2.5 to 4.5V
Balancing Threshold	3.55V
Balancing Current	0.5A
Digital Output Current	4A for 100mS, 2A continuous
Output Delay (default)	30 seconds
Optional Display Interface	CAN
Connection Fault Detection	2mA
CAN bus	Isolated 500K baud (default), proprietary protocol
Dimensions	117mm x 114mm x 36mm, 4.6 in x 4.48 in x 1.41 in
Weight	230g, 8.2 oz
Water resistance	spray resistant, not submersible

Connector Pinout



PIN	Connector A	Connector B	PIN	Connector A	Connector B
1	Sense Enable Out	Chassis	7	CAN H	Over Voltage Output
2	Sense +12V	Ground	8	CAN L	Ground
3	Ground	CPU Reset	9	Shunt-	Ground
4	Sense Data +	CPU Transmit Data	10	Shunt +	Page Select
5	Ground	CPU Receive Data	11	Battery+	Ground
6	Sense Data -	Under Voltage Output	12	12V In	Video

Mating Connector: Deutsch DTM06-12SA (Grey) and DTM06-12SB (Black) Pins: 0462-201-20141



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Connector Signal Descriptions

A1 Sense Enable Out	Output from CPU to sense boards to begin data transfer
A2 Sense +12V	12V power to sense boards
A3,A5,B2,B8,B9,B11 Ground	Ground (12V negative)
A4 Sense Data +	Non-Inverted data
A6 Sense Data -	Inverted data from sense boards (not used for V2 boards)
A7 CANH	CAN Bus high
A8 CANL	CAN Bus low
A9 Shunt -	- terminal of shunt (connected to battery -)
A10 Shunt +	+ terminal of shunt (connected to load/charger -)
A11 Battery +	Isolated battery + to measure battery voltage
A12 +12V	12V power input
B1 Chassis	Chassis connection (leakage current to chassis detection)
B3 CPU Reset	Resets CPU during programming
B4 CPU Transmit Data	Transmitted data from CPU during programming
B5 CPU Received Data	Data received by CPU during programming
B7 Under Voltage Output	Goes low when cell voltage goes below set point or SOC = 0
B8 Over Voltage Output	Goes low when cell voltage above threshold
B10 Page Select	When connected to ground momentarily, causes the page displayed to advance
B12 Video	Composite video monitor

Case Dimensions

